

As the chitin deposit thickens, the hypodermal gland cells come to lie more and more removed from their original position and form, as at C, Fig. 4, until finally when the structure is finished, as in D, there is no further connection between the cells and their finished skeletal product.

These false tracheal tubes serve for sucking fluids up into a central channel formed between the pair of legs which conveys fluid to the mouth. This lobe of the tongue seems homologous with the foot-pads on the other legs and is probably a compound of several pads, very much modified in function.

In many kinds of flies the space between the furrows is covered with spines, many of which are sensory in function. In some flies the furrows appear to be closed tubes, which bear a striking appearance and much resemble true tracheal tubes. It is only by knowing the ontogeny of these structures that one can judge correctly of their nature.

The microtome work, on which these photographs and studies are based, was done by the late Dr. G. S. Shanks.

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AN IMPROVED REAGENT STAND.

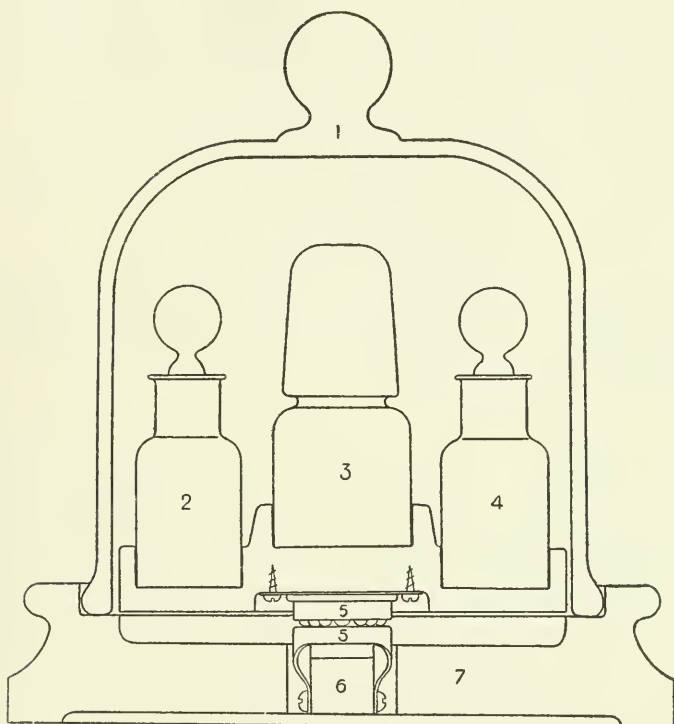
All users of Bausch & Lomb's reagent stand No. 16342 have no doubt found it one of the best devices for the purpose to be obtained. Some of them, like the writer, may have seen times when it would have been an improvement if the reagent bottles were on a revolving base so that by a slight touch the desired bottle could be brought nearest the operator.

The writer obtained the above result so easily and at such small expense that the following cut and description of the modified reagent stand is submitted, hoping it may prove of interest to others.

Referring to the following cut showing a cross section of the stand: The base, in order to reduce the weight, was recessed $5\frac{1}{8}$ inches diameter to a depth $\frac{1}{2}$ inch below the bottom of the recess which received the bell-glass cover.

In order to get the revolving feature, an ordinary ball bearing furniture caster was used by removing the truck and securing the

remainder to a wooden plug one and one-quarter inches diameter inserted into the center of the base of the stand as shown.



To the top surface of the caster was secured a piece of well seasoned wood (Turntable) turned $5\frac{1}{8}$ inches diameter and $1\frac{1}{4}$ inches thick, the bottom side being recessed $\frac{1}{4}$ inch deep to receive the top of the caster, and the top surface recessed with holes of proper diameter and depth to receive the balsam bottle and the seven reagent bottles.

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SEND IN YOUR NOTES.

Send in notes of your most successful methods and practise in collecting, cultivating, breeding, and preserving microscopic animals and plants; your best methods of preparing and displaying some difficult or unusual type; specially effective methods of class demonstration; striking pedagogical devices liable to make microscopic work more valuable to students. Indeed, send any unpublished notes of your discoveries which have added zest or efficiency to your own work. (Ed.)